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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,534

03/05/2007

Gunnar Christer Hansson

06237/LH

4101

1933 7590 04/10/2009  
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
220 Fifth Avenue  
16TH Floor  
NEW YORK, NY 10001-7708

EXAMINER

WEEKS, GLORIA R

ART UNIT

PAPER NUMBER

3721

MAIL DATE

DELIVERY MODE

04/10/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,534	<b>Applicant(s)</b> HANSSON ET AL.	
	<b>Examiner</b> GLORIA R. WEEKS	<b>Art Unit</b> 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This action is in response to the amendment and remarks received on December 30, 2008.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins (USPN 3,901,098).

In reference to claims 10 and 15, Jenkins discloses a power tool comprising: a housing 3; an output shaft 26 driven by a rotation motor 5; and an angle drive mechanism coupling the motor 5 to the output shaft 26, the angle drive mechanism including: a one-piece drive spindle 7 and pinion 8 coupled to the motor 5; a bevel gear mounted 14 on the output shaft 26; wherein the drive spindle 7 is axially supported relative to the housing by a ball bearing 10 having an inner ring 65 and an outer ring 12; and an adjusting device which sets an axial position of the drive spindle 7 and the pinion 8 relative to the bevel gear 14; wherein the outer ring 12 is axially secured relative to the housing 3; and wherein the adjusting device comprises: a threaded portion on said drive spindle 7; an internal thread formed integrally with the inner ring 6 and arranged to cooperate with the threaded portion on the drive spindle; and a coupling device 18.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jinkins (USPN 3,901,098 in view of Droste (USPN 7,216,749).

Regarding claims 11-13 and 16-18, Jinkins discloses a power tool comprising: a one-piece drive spindle 7 and pinion 8 axially supported relative to the housing by a ball bearing 10 having an inner ring 65 and an outer ring 12; and an adjusting device which sets an axial position of the drive spindle 7 and the pinion 8 relative to the bevel gear 14; wherein the outer ring 12 is axially secured relative to the housing 3; and wherein the adjusting device comprises: a threaded portion on said drive spindle 7; an internal thread formed integrally with the inner ring 6, wherein the inner ring 6 is positioned at a recess of the spindle and is arranged to cooperate with the threaded portion on the drive spindle; a coupling ring 18; and a lock ring 17. Jinkins does not disclose the coupling ring 18 to have teeth.

Droste teaches a power tool comprising: a spindle 4 coupled to a gear 43, the spindle supported within a bearing 5, 7, a coupling ring 41 and a lock ring 42; the coupling ring having inner teeth 106 that cooperate with splines 104 on the spindle 4. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the coupling ring as suggested by Droste, since column 7 lines 21-36 of Droste suggests that such a modification

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creates a locked engagement between the spindle and the respective ring(s) thereby securing the ring in a desired position with respect to the spindle.

7. Claim 14 and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (USPN 3,901,098 in view of Yakura et al. (USPN 6,709,161).

With respect to claims 14 and 19, Jenkins discloses a power tool comprising: a one-piece drive spindle 7 and pinion 8 axially supported relative to the housing by a ball bearing 10 having an inner ring 65 and an outer ring 12, but does not disclose the ball bearing as an angular contact ball bearing. It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the ball bearing of Jenkins with a angular contact ball bearing, since column 3 lines 1-4 of Yakura et al. teaches an angular contact ball bearing assists with lubrication of the bearing thus prolonging life of the bearing during high speed rotation and reducing cost.

### ***Response to Arguments***

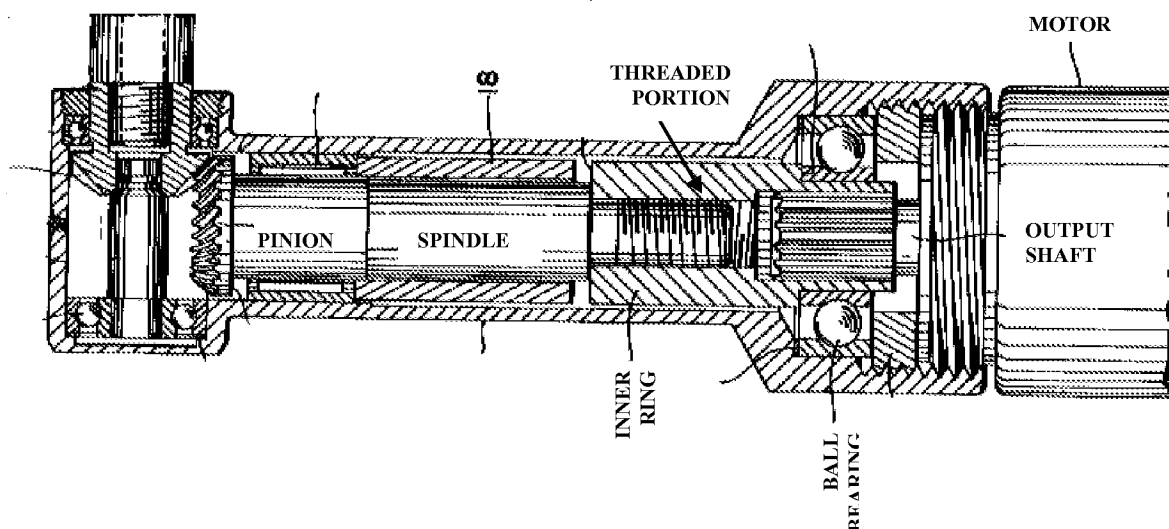
8. Applicant's arguments filed December 30, 2009 have been fully considered but they are not persuasive.

9. Applicant has argued that primary reference, Jenkins, fails to disclose an axial position adjustment mechanism, but does not disclose what specific structural limitations of Applicant's claimed invention are not disclosed by Jenkins.

Claim 10 of Applicant's invention states that an adjustment device comprises a threaded portion on a drive spindle that is coupled to a motor and carry a pinion; a ball bearing having an inner ring with internal threads, wherein the internal threads cooperating with the threaded portion of the drive spindle (*see diagram below*). Although Jenkins labels the inner ring element

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as an adapter, the orientation and structure of the element is found to meet the limitations of Applicant's invention as claimed. Examiner is unable to determine a particular structural limitation in the specification or the claims that negate Examiner from interpreting the respective element (6) of Jenkins as an "inner ring" of the ball bearing. Furthermore, the respective element is radially inward of the ball bearing with respect to the axis of rotation of the drive spindle and motor output shaft.



**Angle Drive Unit of Jenkins**

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching,

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suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.<sup>1</sup>

Although Examiner has revised the motivation for modifying Jenkins in view of Droste, Examiner maintains that there is proper motivation for the combination of the respective references. In this case, both Jenkins and Droste disclose rotary power tools having spindles, wherein in structure is disclosed to ensure proper rotational drive of the spindle, thereby resulting in appropriate and desired transfer of rotation movement to a bit coupled to the spindle.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GLORIA R. WEEKS whose telephone number is (571)272-4473. The examiner can normally be reached on M-F 7am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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<sup>1</sup> See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Other helpful telephone numbers are listed for applicant's benefit:

- Allowed Files & Publication (888) 786-0101
- Assignment Branch (800) 972-6382
- Certificates of Correction (703) 305-8309
- Fee Questions (571) 272-6400
- Inventor Assistance Center (800) PTO-9199
- Petitions/special Programs (571) 272-3282
- Information Help line 1-800-786-9199

/Gloria R. Weeks/  
Examiner, Art Unit 3721

/Rinaldi I Rada/  
Supervisory Patent Examiner, Art Unit  
3721

April 9, 2009